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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,328	04/19/2004	Kuo-Yen Lai	Lai- 9308	9481
7590		11/01/2005	EXAMINER	
HungChang Lin		DZIERZYNSKI, EVAN P		
8 Schindler Ct.		ART UNIT		
Silver Spring, MD 20903		PAPER NUMBER		
		2875		

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

E)C

Office Action Summary

Application No.

10/826,328

Applicant(s)

LAI, KUO-YEN

Examiner

Evan Dzierzynski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: The reference numeral 14d, which is shown in the drawings, is missing from the specification. Appropriate correction is required.

Claim Objections

The claims are objected to because of the following informalities: Claim 13 does not include a parent claim. For this application claim 13 is being interpreted as being dependant on claim 1. Also, there are several typographical errors throughout the claims including double periods on claims 3 and 15, and underlining the claim number in claim 5, which is improper. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

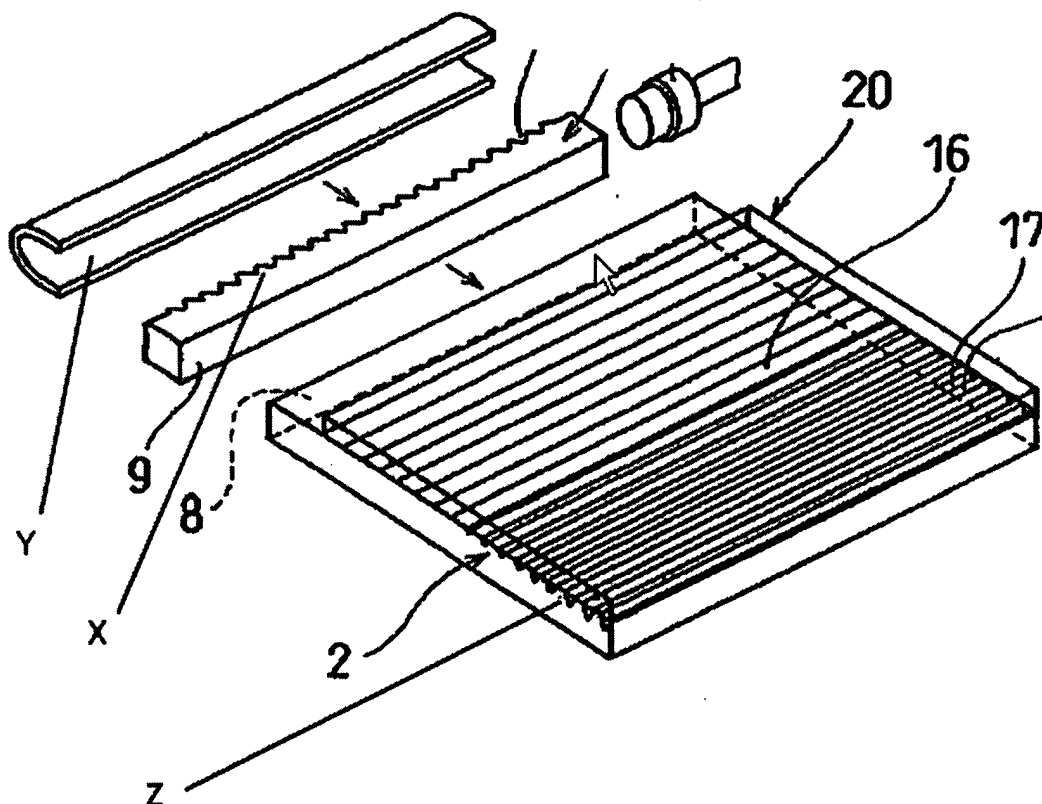
Claims 1-3, 7-8, 12, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Asakawa et al. (US Pat 6609806).

Asakawa et al. teaches backlight system for a display panel comprising a point light source 4, a first light reflecting unit 12,13 to reflect and to spread the incident light beam from the light source in a first direction, and a second light reflecting unit 16 to spread the reflected light from the first light reflecting unit in a second direction and to

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project the reflected light from the second light reflecting unit onto a display screen 10 as a backlight

As for claim 2, Asakawa further teaches the first light reflecting unit having a ladder planar contour (indicated below as X) and a curved surface contour reflecting surface (indicated below as Y).



As for claim 3, Asakawa further teaches the second reflecting unit having a Ladder convex contour sloped reflecting surface (indicated above as Z).

As for claim 7, Asakawa further shows that the second reflecting unit lies over the first reflecting unit as shown in figure 2, rotated 180 degrees.

As for claim 8, Asakawa further teaches that the first reflecting unit 12 is integrated with the second reflecting unit, as seen in figure 2.

As for claim 12, Asakawa further teaches that the light source is at the same elevation as the first reflecting unit (Fig 1).

As for claim 14, Asakawa further shows that the light source is elevated over the top of the second reflecting unit (Fig 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asakawa in view of Wortman et al. (US Pat 5771328).

As for claim 4, Asakawa teaches the device as discussed above, but fails to teach the reflecting surface of the second reflecting unit as being tilted toward the display screen. Wortman et al. teaches a reflecting unit (fig 8) that is tilted toward the display screen. It would have been obvious for one of ordinary skill in the art to combine the tilted reflecting unit of Wortman et al. with the device of Asakawa in order provide a desired lighting effect (column 4, lines 35+).

As for claim 5, Asakawa further teaches that the reflecting surface is the front surface of the second reflecting unit facing the display screen, as seen in Figure 2.

As for claim 6, Asakawa and Wortman et al. teach the device as discussed above, Wortman et al. further teaches that the reflecting surface is the inner back surface 156 of the second reflecting unit away from the display screen. The second

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reflecting unit is interpreted as being transparent, since figure 8 shows the light beam go through the second reflecting unit 156 and reflect out through the device. It would have been obvious for one of ordinary skill in the art to combine the reflective surface of Wortman et al. with the device of Asakawa in order so that the light can travel into and back out of the transparent unit, so that it can be reflected onto the display screen.

As for claim 13, Asakawa teaches the device as discussed above, but fails to disclose a light source that is elevated with respect to the first reflecting unit. Wortman et al. teaches a light source 152 that is elevated with respect to the first reflecting unit 156. It would have been obvious for one of ordinary skill in the art to combine the elevated light source of Wortman et al. with the device of Asakawa in order to achieve a particular lighting effect.

Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asakawa as applied to claim 1 above, and further in view of Sugawara (US Pat 6344929).

As for claim 9, Asakawa teaches the device as discussed above but fails to teach it further comprising a parabolic mirror to reflect and to project the light from the light source toward the first reflecting unit. Sugawara teaches a parabolic mirror 2. It would have been obvious for one of ordinary skill in the art to combine the mirror of Sugawara with the device of Asakawa in order to reflect more of the light from the light unit into the device.

As for claim 10, Asakawa teaches the device as discussed above, but fails to teach it further comprising a polarizer plate inserted in the light pass. Sugawara

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teaches a polarizer plate 5. It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the polarizer plate of Sugawara with the device of Asakawa in order to polarizer the light as it goes into the device for a lighting effect.

As for claim 11, Asakawa teaches the device as discussed above, see the discussion of claim 10 for the polarizer plate. It would have been obvious for one of ordinary skill in the art to place the polarizer plate between the light source and the first lighting unit in order to more uniformly direct the light rays into the first reflecting unit.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asakawa as applied to claim 1 above, and further in view of Sawayama (US Pat 6048071).

As for claim 15, Asakawa teaches the device as discussed above, but fails to teach a matrix array of domes that is selected from the group consisting of hemispheric domes, elliptical domes, and recessed domes. Sawayama teaches an elliptical matrix array of domes 65. It would have been obvious for one of ordinary skill in the art to combine the domes of Sawayama with the device of Asakawa in order to provide a lighting effect for the device.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Egawa et al. (US Pat 6286970) and Suzuki et al. (US Pat 6752506) teach backlight systems with several embodiments of differing ladder reflectors. Nakaoka et al. (US Pat 6799860) teaches a point light source oriented light

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guide system with two reflecting units. Yu et al. (US Pub 2004/0201976) teaches a backlight module with a point light source that has a reflecting unit tilted towards the display area.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evan Dzierzynski whose telephone number is (571)-272-2336. The examiner can normally be reached on Monday through Friday 7:00 am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee Luebke can be reached on M-F (571)-272-2009. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Evan Dzierzynski

10/27/05


RENEE LUEBKE
PRIMARY EXAMINER

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